

# **Historic Photo Analysis (HPA)**

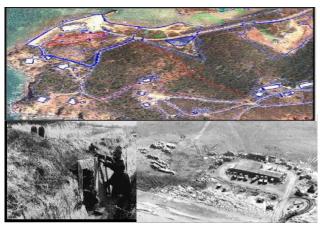
### U.S. ARMY CORPS OF ENGINEERS

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# **Description and Background**

The Army Geospatial Center (AGC) conducts GIS-based Historical Photographic Analyses (HPA) of current, former and closing U.S. Military installations. Analysts analyze aerial photography to address environmental concerns related to land use change, such as historical wetland evaluation, shoreline change, watershed/land use mapping and produces a variety of baseline environmental analyses.

The identification and remediation of hazardous sites is a problem faced by many active, closing and former U.S. military installations. These problems are complicated by the fact that many of these sites were created by practices and activities undertaken years or even decades ago. These hazardous sites



are often completely obscured today due to the burial of materials, rapid revegetation, or dramatic changes in land use. The AGC's Hydrologic and Environmental Analysis Branch (WSH) uses unclassified historical aerial photography and satellite imagery, both CONUS and OCONUS, to locate potential sites of environmental contamination, (e.g. chemical warfare material (CWM), unexploded ordnance (UXO), radioactive material or landfill locations). In addition to locating potential contamination sites, the branch conducts GIS-based Historical Photogeologic Analyses for areas where groundwater contamination is a concern. Surface features that can influence the migration of contaminants, e.g. rock fractures, and for use in support of geophysical studies.

GIS-based Historical Photographic Analyses enables one to view the landscape prior to land cover or land use change.

#### **Key Capabilities**

A diverse interdisciplinary team (geologists, geographers, foresters, photogrammetrists, archival researchers, and others) provides GIS-based Historical Photographic Analyses and GIS-based Photogeologic Analyses to various Department of Defense customers. These products support the Defense Environmental Restoration Program (DERP), Installation Restoration Program (IRP), Formerly Used Defense Sites (FUDS), Base Realignment and Closure (BRAC) and Formerly Utilized Sites Remedial Action Program (FUSRAP) site investigations. The use of Geographic Information Systems or GIS is a primary component of the work. GIS allows a customer to view multilayer "time-sequenced" data in a digital environment. Another service offered is historic data research through government, private, and scholastic sources for archival data.

#### **Product Development**

Producer - U.S. Army Corps of Engineers, Army Geospatial Center, Warfighter Geospatial Support & Production Directorate. Each HPA study is custom made to meet the unique requirements of the requestor. Typically both soft and hard copy final versions are provided and analysts are available to attend and brief program managers concerning the reported findings.

#### **Current Status**

Complete HPA studies are not available from AGC, but reside with the requesting organization.

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